

Interannual Variability of the Somali Jet

David Halpern
Jet Propulsion Laboratory
California Institute of Technology
Pasadena, CA 91109
U.S.A.

One factor contributing to the 20% variability of summer monsoon rainfall along the west coast of India is believed to be the Somali Jet. During June - September 1988 – 1998, a stronger Somali Jet (estimated from satellite data) was associated with excess rainfall along the west coast of India, which supports a conjecture that Somali Jet surface wind convergence increases the amount of cloud liquid water (estimated from satellite data) in the eastern Arabian Sea. Also, tentative evidence indicates that the Somali Jet was weaker during El Niño compared to its strength during La Niña, which supports results determined from modeling studies. However, the increased sea surface temperature over the Arabian Sea arising from reduced wind speed during El Niño could be expected to yield higher rainfall. However, during El Niño, the amount of rainfall along the India west coast was less than during La Niña. An 11-year interval is clearly not long enough to make statistically reliable conclusions, and results derived from a longer period will be discussed.